Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the applications. Claims 2, 5-21, 44-58, 78 and 79 are canceled. Claims 1, 3, 4, and 22-77 have been previously presented.

Listing of Claims:

1. (Previously presented): In a method of etching a surface of a wafer with a microscopic roughness to prepare the wafer surface for receiving a deposition of a material on the wafer surface, the steps of

 removing a thin layer from the surface of the wafer to eliminate any impurities from the surface of the wafer,

 wherein the material of the thin layer is the same as the material of the remaining wafer, and

 thereafter creating the microscopic roughness on the surface of the wafer to receive a deposition of the material on the surface by providing ions of an inert gas by physical RF plasma etch with an insufficient energy to etch the surface of the wafer but with a sufficient energy to create the microscopic roughness on the surface of the wafer.

2. (Canceled)

3. (Previously presented): In a method as set forth in claim l wherein the inert gas is argon.

4. (Previously presented): In a method as set forth in claim 1

 wherein the wafer is disposed on a waferland and

 wherein a layer of chromium is deposited on the waferland after the microscopic roughness has been produced on the surface of the wafer.

5-21. (Canceled)

22. (Previously presented): In a method of providing for an attachment of an electrical component to a wafer, the steps of:

 removing a thin layer from the surface of the wafer by ions of inert gas by physical RF plasma etch,

wherein the material of the thin layer is the same as the material of the remaining wafer,

thereafter providing the surface of the wafer with a microscopic roughness,

thereafter depositing a layer of chromium on the microscopically rough surface of the wafer with a low intrinsic tensile stress, and

thereafter depositing a layer of nickel vanadium on the surface of the wafer with a low intrinsic compressive stress.

23. (Previously presented): In a method as set forth in claim 22

wherein a layer of a metal selected from a group consisting of gold, silver and copper is deposited on the surface of the nickel vanadium layer and

wherein a component is soldered to the layer of the metal selected from the group consisting of copper, gold and silver.

24. (Previously presented): In a method as set forth in claim 23

wherein the layer of the chromium is deposited on the microscopically rough surface of the wafer with no RF bias.

25. (Previously presented): In a method as set forth in claim 22

wherein the layer of chromium is deposited on the microscopically rough surface of the wafer at a low rate of the flow of an inert gas.

26. (Previously presented): In a method as set forth in claim 24

wherein the layer of chromium is deposited on the microscopically rough surface of the wafer at a low rate of flow of an inert gas and

wherein an RF bias power is applied during the deposition of the nickel vanadium layer on the chromium layer to produce the low intrinsic compressive stress in the nickel vanadium layer.

27. (Previously presented): In a method as set forth in claim 22

wherein the layer of the chromium is deposited on the microscopically rough surface of the wafer with no RF bias and

wherein the layer of chromium is deposited on the microscopically rough surface of the wafer at a low rate of flow of an inert gas and

wherein an RF bias power is applied during the deposition of the nickel vanadium layer on the chromium layer to produce the low intrinsic compressive stress in the nickel vanadium layer.

28. (Previously presented): In a method as set forth in claim 27

wherein a layer of a metal selected from a group consisting of gold, silver and copper is deposited on the surface of the nickel vanadium layer and

wherein the component is soldered to the layer of the metal selected from the group consisting of copper, gold and silver.

29. (Previously presented): In a method of providing a deposition on a surface of a wafer, the steps of:

removing a thin layer from the surface of the wafer to eliminate impurities from the surface of the wafer,

wherein the material of the thin layer is the same as the material of the remaining wafer,

creating a microscopic roughness on the surface of the wafer, and

depositing a chromium layer with a low intrinsic tensile stress on the microscopically rough surface of the wafer.

30. (Previously presented): In a method as set forth in claim 29

wherein the chromium layer is deposited on the microscopically rough surface of the wafer in a chamber and

wherein an inert gas having a low flow rate is passed through the chamber with no RF bias on the wafer, when the chromium layer is deposited on the microscopically rough surface of the wafer, to prevent molecules of the inert gas from being entrapped in the chromium layer.

31. (Previously presented): In a method as set forth in claim 30

wherein the inert gas is argon.

32. (Previously presented): In a method as set forth in claim 30

wherein the microscopic roughness is produced on the surface of the wafer by providing the molecules of the inert gas with an insufficient energy to etch the surface of the wafer but with a sufficient energy to create the microscopic roughness on the surface of the wafer.

33. (Previously presented): In a method as set forth in claim 29

wherein no RF bias is provided when the chromium layer is deposited on the surface of the wafer and

wherein the chromium layer is deposited on the microscopically rough surface of the wafer in a chamber and

wherein an inert gas having a low flow rate is passed through the chamber, when the chromium layer is deposited on the microscopically rough surface of the wafer, to prevent the inert gas from being entrapped in the chromium layer and

wherein the inert gas is argon.

34. (Previously presented): In a method as set forth in 31

wherein the wafer is disposed on a waferland and

wherein a layer of chromium is deposited on the waferland, before etching the wafer surface, to prevent the layer of chromium deposited on the wafer from being contaminated by the material from the waferland.

35. (Previously presented): In a method of preparing a wafer surface for receiving an electronic component, the steps of:

removing a thin layer from the surface of the wafer,

wherein the material of the thin layer is the same as the material of the remaining wafer,

thereafter creating a microscopic roughness on the surface of the wafer by providing ions of an inert gas by physical RF plasma etch with an insufficient energy to etch the surface of the wafer but with a sufficient energy to create the microscopic roughness on the surface of the wafer, and

thereafter depositing a chromium layer on the microscopically rough surface of the wafer in a chamber in which a minimal amount of an inert gas is passed through the chamber during the deposition to prevent molecules of the inert gas from being entrapped in the chromium layer.

36. (Previously presented): In a method as set forth in claim 35

wherein no wafer bias is produced on the wafer when the chromium layer is deposited on the surface of the wafer.

37. (Previously presented): In a method as set forth in claim 35

wherein the chromium layer is deposited on the surface of the wafer under tension with a low amount of stress.

38. (Previously presented): In a method as set forth in claim 36

wherein the chromium layer is deposited on the surface of the wafer with a low amount of intrinsic tensile stress.

39. (Previously presented): In a method of providing a deposition on a surface of a wafer for receiving an electronic component on the wafer surface, the steps of:

removing a thin layer from the surface of the wafer,

wherein the material of the thin layer is the same as the material of the remaining wafer,

creating a microscopic roughness on the surface of the wafer, and

atomically bonding a chromium layer to the microscopically rough surface on the wafer.

40. (Previously presented): In a method as set forth in claim 39

wherein the chromium layer is deposited on the microscopically rough surface of the wafer with no RF bias.

41. (Previously presented): In a method as set forth in claim 39, the step of:

providing a low intrinsic tensile stress in the chromium layer.

42. (Previously presented): In a method as set forth in claim 39

wherein the microscopic roughness on the surface of the wafer is provided by disposing the wafer in a chamber and by passing ions of an inert gas by physical RF plasma etch through the chamber with insufficient energy to etch the surface of the wafer but with sufficient energy to produce the microscopic roughness on the surface of the wafer.

43. (Previously presented): In a method as set forth in claim 40

wherein an intrinsic tensile stress is provided with a low value in the chromium layer and

wherein the microscopic roughness on the surface of the wafer is provided by disposing the wafer in a chamber and by passing ions of an inert gas by physical RF plasma etch through the chamber with insufficient energy to etch the surface of the wafer but with sufficient energy to produce the microscopic roughness on the surface of the wafer.

44-58. (Canceled):

59. (Previously presented): In a method of etching a surface of a wafer with a microscopic roughness, the steps of:

providing a flow of an inert gas in the order of forty (40) to fifty (50) standard cubic centimeters per minute through a chamber containing the wafer and at a relatively high gas pressure in the order of 4-6 x 10^{-3} Torr to remove a thin layer from the surface of the wafer,

thereafter providing a flow of an inert gas through the chamber at a flow rate of approximately forty (40) to fifty (50) standard cubic centimeters per minute and a power in the order of six hundred watts (600 W) to twelve hundred watts (1200 W) to remove impurities from the surface of the wafer and provide an atomically rough surface,

disposing the wafer on a waferland, and

then providing a flow of an inert gas at a rate of approximately 40-50 standard cubic centimeters per minute through the chamber at a low power in the order of fifty watts (50 W) to one hundred watts (100 W) to provide the surface of the wafer with the microscopic roughness.

60. (Previously presented): In a method as set forth in claim 59

wherein the power applied in the chamber to remove the impurities from the surface of the wafer is in the order of 600- 1200 watts for approximately thirty (30) seconds and

wherein the flow of the inert gas through the chamber to provide the surface of the wafer with the microscopic roughness occurs for a period of approximately sixty (60) seconds.

61. (Previously presented): In a method as set forth in claim 59

wherein a layer of chromium is deposited on the microscopically rough surface of the wafer without any RF bias and at a low flow rate of the inert gas.

62. (Previously presented): In a method as set forth in claim 59

wherein a layer of nickel vanadium is deposited on the surface of the chromium layer with an RF bias power of approximately 300 watts and with a flow rate of argon of approximately 5 sccm.

63. (Previously presented): In a method as set forth in claim 60

wherein a layer of chromium is deposited on the surface of the waferland before the surface of the wafer is etched.

64. (Previously presented): In a method as set forth in claim 60

wherein the nickel vanadium layer is deposited on the chromium layer with a power of approximately six thousand watts (6000 W), with a flow rate of argon of approximately five (5) sccm and with RF power of approximately three hundred (300) watts.

65. (Previously presented): In a method as set forth in claim 29

wherein the chromium layer is deposited with a low intrinsic tensile stress on the microscopically rough surface by providing the layer with no RF bias.

66. (Previously presented): In a method as set forth in claim 29

wherein the microscopic roughness is created on the surface of the wafer by providing ions of an inert gas by physical RF plasma etch on the surface of the wafer with an insufficient energy to etch the surface of the wafer but with a sufficient energy to create the microscopic roughness on the surface of the wafer.

67. (Previously presented): In a method as set forth in claim 1

wherein the inert gas is argon and

wherein the wafer is disposed on a waferland and

wherein a layer of chromium is deposited on the waferland after the microscopic roughness has been produced on a the surface of the wafer.

68. (Previously presented): In a method as set forth in claim 22

wherein the microscopic roughness on the surface of the layer is created by providing ions of an inert gas by physical RF plasma etch on the surface of the wafer with an insufficient energy to etch the surface of the wafer but with a sufficient energy to create the microscopic roughness on the surface of the wafer.

69. (Previously presented): In a method as set forth in claim 39

wherein the microscopic roughness is created on the surface of the wafer by providing ions of an inert gas by physical RF plasma etch on the surface of the wafer with an insufficient energy to etch the surface of the wafer but a sufficient energy to create the microscopic roughness on the surface of the wafer.

70. (Previously presented): In a method as set forth in claim l wherein the inert gas pressure is about 4 x 10^{-3} Torr.

71. (Previously presented): In a method as set forth in claim l wherein the inert gas flow is between 40 to 50 sccm.

72. (Previously presented): In a method as set forth in claim l wherein the energy provided to the ions of the inert gas is between 50 to 100W.

73. (Previously presented): In a method as set forth in claim l wherein the microscopic roughness is an atomic-scaled roughness.

74. (Previously presented): In a method as set forth in claim 22 wherein the microscopic roughness is an atomic-scaled roughness.

75. (Previously presented): In a method as set forth in claim 29 wherein the microscopic roughness is an atomic-scaled roughness.

76. (Previously presented): In a method as set forth in claim 35 wherein the microscopic roughness is an atomic-scaled roughness.

77. (Previously presented): In a method as set forth in claim 39 wherein the microscopic roughness is an atomic-scaled roughness.

78-79. (Canceled).